What is claimed is:

1. An optical fiber provided with

a center core and

a first side core formed at the outside of said center core, wherein

an apparent refractive index difference of said center core is 1.15 to 1.40%,

a constant α expressing a profile of a distribution of refractive index of said center core is 1.0 to 5.0,

an apparent refractive index difference of said first side core is -0.60 to -0.35,

a diameter ratio (b/a) of a diameter (b) of said first side core layer to a diameter (a) of said center core is 1.6 to 2.4,

a dispersion value is -60 to -35 ps/nm/km and a dispersion slope is -0.40 to -0.10 ps/nm^2/km when a wavelength of light propagated through said center core is the 1.55 μm band,

a transmission loss of 0 to 0.35 dB/km, a ratio of loss to dispersion (figure of merit (FOM)) of 120 to 500 (ps/nm)/dB, a polarization mode dispersion (PMD) of 0 to 0.15 ps/$\sqrt{}$km, and an effective core area (Aeff) of 19 to 50 μm^2 when the wavelength of the light propagated through the center core is the 1.55 μm band, and

a bending loss at a diameter of 20 mm of 0 to 5 dB/m.

2. An optical fiber as set forth in claim 1, wherein the wavelength of the 1.55 μm band is a band of a wavelength of 1.40 to 1.65 μm.

3. An optical fiber as set forth in claim 1, wherein a ratio of the dispersion slope to the dispersion (dispersion/dispersion slope, DPS) of said optical fiber is substantially equal or close to the DPS of a 1.31 zero-dispersion single mode optical fiber.

4. An optical fiber as set forth in claim 1, wherein the effective core area (Aeff) is 23 to 50 μm^2 when the wavelength of the light propagated through said center core is 1.55 μm.

5. An optical fiber as set forth in claim 1, wherein the transmission loss is not more than 0.27 dB/km and the FOM is not less than 170 ps/nm/dB when the wavelength of the light propagated through said center core is 1.55 μm.

6. An optical fiber as set forth in claim 1, wherein

the transmission loss is not more than 0.30 dB/km when the wavelength of the light propagated through said center core is 1.58 μm and

the absolute value of the (transmission loss at

the wavelength of light propagated through the center core of 1.58 μm) - (transmission loss at the wavelength of light propagated through the center core of 1.55 μm) is not more than 0.01 dB/km.

7. An optical fiber as set forth in claim 1, further having a second side core layer formed at the outside of said first side core layer, having an apparent refractive index difference of 0.05 to 0.35%, and having a diameter ratio (c/b) of the diameter (c) of the second side core layer with respect to the diameter (b) of the first side core layer of 1.3 to 1.7.

8. A wavelength division multiplex transmission line comprised of

a 1.31 zero-dispersion single mode optical fiber or a positive dispersion optical fiber having characteristics similar to the characteristics of said single mode optical fiber (SMF) and

an optical fiber as set forth in claim 1

connected together to suppress dispersion of a specific wavelength of the 1.5 μm band to a low dispersion.

9. A wavelength division multiplex transmission line as set forth in claim 8, wherein said positive dispersion optical fiber similar in characteristics to said single mode optical fiber (SMF) includes a cutoff

shifted optical fiber having a cutoff wavelength shifted to the long wavelength side, a pure silica optical fiber having a fluorine layer as a cladding layer, a fully fluoride doped optical fiber, and an enlarged effective core area type single mode optical fiber.

10. An optical fiber provided with

a center core and

a first side core formed at the outside of said center core, wherein

an apparent refractive index difference of said center core is 0.9 to 1.4%,

a constant α expressing a profile of a distribution of refractive index of said center core is 1.0 to 5.0,

an apparent refractive index difference of said first side core is -0.65 to -0.35%,

a diameter ratio (b/a) of a diameter (b) of said first side core layer to a diameter (a) of said center core is 1.6 to 2.4,

a dispersion value is -60 to -35 ps/nm/km and a dispersion slope is -0.40 to -0.05 ps/nm^2/km when a wavelength of light propagated through said center core is the 1.55 μm band,

a transmission loss of 0 to 0.35 dB/km, a ratio of loss to dispersion (figure of merit (FOM)) of 120 to

500 (ps/nm)/dB, a polarization mode dispersion (PMD) of 0 to 0.15 ps/$\sqrt{}$km, and an effective core area (Aeff) of 19 to 50 μm^2 when the wavelength of the light propagated through the center core is the 1.55 μm band, and

a bending loss at a diameter of 20 mm of 0 to 20 dB/m.

11. An optical fiber as set forth in claim 10, wherein

the apparent refractive index difference of said center core is 1.0 to 1.4% and

the bending loss at a diameter of 20 mm is 0 to 10 dB/m.

12. An optical fiber as set forth in claim 10, wherein

the apparent refractive index difference of said center core is 1.15 to 1.4% and

the bending loss at a diameter of 20 mm is 0 to 5 dB/m.

13. An optical fiber as set forth in claim 10, wherein the wavelength of the 1.55 μm band is a band of a wavelength of 1.40 to 1.65 μm.

14. An optical fiber as set forth in claim 10, wherein a ratio of the dispersion slope to the dispersion (dispersion/dispersion slope, DPS) of said optical fiber is substantially equal or close to the DPS of a 1.31

zero-dispersion single mode optical fiber.

15. An optical fiber as set forth in claim 10, wherein the effective core area (Aeff) is 23 to 50 μm^2 when the wavelength of the light propagated through said center core is 1.55 μm.

16. An optical fiber as set forth in claim 10, wherein the transmission loss is not more than 0.27 dB/km and the FOM is not less than 170 ps/nm/dB when the wavelength of the light propagated through said center core is 1.55 μm.

17. An optical fiber as set forth in claim 10, wherein

the transmission loss is not more than 0.30 dB/km when the wavelength of the light propagated through said center core is 1.58 μm and

the absolute value of the (transmission loss at the wavelength of light propagated through the center core of 1.58 μm) - (transmission loss at the wavelength of light propagated through the center core of 1.55 μm) is not more than 0.01 dB/km.

18. An optical fiber as set forth in claim 10, further having a second side core layer formed at the outside of said first side core layer, having an apparent refractive index difference of 0.05 to 0.35%, and having a diameter ratio (c/b) of the diameter (c) of the second

side core layer with respect to the diameter (b) of the first side core layer of 1.3 to 1.7.

19. A wavelength division multiplex transmission line comprised of

a 1.31 zero-dispersion single mode optical fiber or a positive dispersion optical fiber having characteristics similar to the characteristics of said single mode optical fiber (SMF) and

an optical fiber as set forth in claim 10

connected together to suppress dispersion of a specific wavelength of the 1.5 μm band to a low dispersion.

20. A wavelength division multiplex transmission line as set forth in claim 19, wherein said positive dispersion optical fiber similar in characteristics to said single mode optical fiber (SMF) includes a cutoff shifted optical fiber having a cutoff wavelength shifted to the long wavelength side, a pure silica optical fiber having a fluorine layer as a cladding layer, a fully fluoride doped optical fiber, and an enlarged effective core area type single mode optical fiber.